

Rotor and Exciter Ring

Abstract

A rotor assembly with a cylindrical body having a radial disc that is perpendicularly aligned with a hub of a vehicle and an exciter ring through which a sensor detects rotation of the radial disc.

The exciter ring is concentrically installed within the cylindrical body to define a gap between a flange thereon and the radial disc. Reluctance sections on the flange are axially aligned with the sensor to generate a signal indicative of rotation. Friction members engage the radial disc and generate thermal energy that is conducted a mounting flange. Thermal energy level may cause the rotor assembly to expand and change the alignment of the radial disc from perpendicular and non-perpendicular with respect to the hub. The gap allows the radial disc and exciter ring to independently move such that the reluctance sections remain axially aligned with the sensor and sensed information is an accurate indication of rotation.